

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

**DOCKET NO. 2009-3-E**

In the Matter of  
Annual Review of Base Rates  
for Fuel Costs for  
Duke Energy Carolinas, LLC

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**TESTIMONY OF  
JANE L. McMANEUS**

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1   **Q.     PLEASE STATE YOUR NAME, ADDRESS AND POSITION.**

2   A.     My name is Jane L. McManeus. My business address is 526 South Church Street,  
3           Charlotte, North Carolina. I am Director, Rates for Duke Energy Carolinas, LLC  
4           ("Duke Energy Carolinas" or the "Company").

5   **Q.     WHAT ARE YOUR PRESENT RESPONSIBILITIES AT DUKE ENERGY**  
6           **CAROLINAS?**

7   A.     I am responsible for managing Duke Energy Carolinas' fuel recovery processes,  
8           providing regulatory support for retail and wholesale rates, and providing guidance  
9           on compliance with regulatory conditions and codes of conduct.

10  **Q.     PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND**  
11           **PROFESSIONAL EXPERIENCE.**

12  A.     I graduated from Wake Forest University with a Bachelor of Science in  
13           Accountancy and received a Master of Business Administration degree from the  
14           McColl Graduate School of Business at Queens University of Charlotte. I am a  
15           certified public accountant licensed in the state of North Carolina and am a member  
16           of the Southeastern Electric Exchange Rates and Regulation Section and the EEI  
17           Rate and Regulatory Analysts group. I began my career with Duke Energy  
18           Carolinas (formerly Duke Power Company) in 1979 as a staff accountant and have  
19           held a variety of positions in the finance organizations. From 1994 until 1999, I  
20           served in financial planning and analysis positions within the electric transmission  
21           area of Duke Power. I was named Director, Asset Accounting for Duke Power in

1 1999 and appointed to Assistant Controller in 2001. As Assistant Controller I was  
2 responsible for coordinating Duke Power's operational and strategic plans,  
3 including development of the annual budget and performing special studies. I joined  
4 the Rate Department in 2003 as Director, Rate Design and Analysis. Beginning in  
5 April 2006, I became Director, Regulatory Accounting and Filings, leading the  
6 regulatory accounting, cost of service, regulatory filings (including fuel) and revenue  
7 analysis functions for Duke Energy Carolinas. I began my current position in the  
8 Rate Department in October 2006.

9 **Q. ARE YOU FAMILIAR WITH THE ACCOUNTING PROCEDURES AND**  
10 **BOOKS OF ACCOUNT OF DUKE ENERGY CAROLINAS?**

11 A. Yes. The books of account of Duke Energy Carolinas follow the uniform  
12 classification of accounts prescribed by the Federal Energy Regulatory Commission  
13 ("FERC").

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
15 **PROCEEDING?**

16 A. The purpose of my testimony is to provide the actual fuel and environmental cost  
17 data for the period June 2008 through May 2009, the period under review in this  
18 proceeding; the projected fuel and environmental cost information for the period  
19 June 2009 through September 2010; and the Company's recommended fuel factors  
20 by customer class for the billing period October 2009 through September 2010.

1   **Q.   YOUR TESTIMONY INCLUDES NINE EXHIBITS.  WERE THESE**  
2           **EXHIBITS PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER**  
3           **YOUR SUPERVISION?**

4   A.   Yes. Each of these exhibits was prepared at my direction and under my supervision.

5   **Q.   PLEASE PROVIDE A DESCRIPTION OF THE EXHIBITS.**

6   A.   The exhibits and descriptions are as follows:

7	Exhibit 1 -	Total Company Fuel Costs Detail for the Review Period
8	Exhibit 2 -	Coal Cost per MBTU Burned
9	Exhibit 3 -	Nuclear Cost per MBTU Burned
10	Exhibit 4 -	Source of Generation by Period
11	Exhibit 5 -	Actual and Estimated Fuel Costs and Revenues for June
12		2008 – September 2009
13	Exhibit 6 -	Projected Period Fuel Costs for October 2009 – September
14		2010
15	Exhibit 7 -	Actual and Estimated Environmental Cost and Revenues for
16		June 2008 – September 2009
17	Exhibit 8 -	Projected Period Environmental Cost for October 2009 –
18		September 2010
19	Exhibit 9 -	Projected Period Fuel Factors by Customer Class

20   **Q.   HOW DOES DUKE ENERGY CAROLINAS MEET ITS CUSTOMERS’**  
21           **NEEDS FOR ELECTRICITY?**

22   A.   Duke Energy Carolinas meets its customers’ needs for electricity through a  
23           combination of Company-owned generation, purchases of power from others, and  
24           customer demand-side options. Demand-side options include residential and non-  
25           residential programs that provide credits to customers for allowing the Company to

1 curtail their electricity usage on occasion. Each day, Duke Energy Carolinas selects  
2 the combination of Company-owned generating units and available power purchases  
3 that will reliably meet customer needs in a least cost manner. Units with the lowest  
4 overall operating costs (fuel, environmental and variable operations and  
5 maintenance costs, etc.) are typically dispatched first, with higher cost units added  
6 as load increases. Intraday adjustments are made to reflect changing conditions and  
7 purchase opportunities. Company Witness Ron A. Jones discusses the nuclear fleet  
8 operations and Company witness John J. Roebel discusses fossil and hydroelectric  
9 operations.

10 Additionally, the Company monitors the energy market, evaluating long-  
11 term, seasonal, monthly, weekly, daily and hourly purchase opportunities. In  
12 making these daily decisions on which resources should be used to meet customer  
13 needs, the Company may purchase energy from other suppliers, whether under long-  
14 term capacity agreements that the Company has entered into or short-term spot  
15 market purchases to ensure a selection of the most cost-effective, reliable solution.

16 **Q. PLEASE DESCRIBE THE RELATIVE COSTS OF THE VARIOUS FUELS**  
17 **USED BY DUKE ENERGY CAROLINAS FOR ITS GENERATING UNITS.**

18 A. Nuclear fuel is the least costly fuel for the Company with a cost of approximately  
19 .505 cents per kilowatt hour (“¢/kWh”). Coal costs are approximately 2.50 to 5.77  
20 ¢/kWh depending on the generating plant. Although the cost of natural gas and fuel  
21 oil on a cents per kWh basis are usually significantly higher, the fuel expense for  
22 these fuels is small compared to total fuel expense due to the limited need to call on

1 combustion turbine resources. The fuel cost of conventional hydroelectric  
2 generation is essentially zero. The cost of pumped storage hydroelectric generation  
3 is the fuel cost of the generating unit used to pump the water to the upper reservoir.  
4 Hydroelectric operation is limited by the amount of rainfall and the amount of water  
5 that can be drawn through the units in compliance with the Company's operational  
6 licenses. As discussed later, the cost of renewable purchases or owned renewable  
7 generation is the Company's avoided fuel cost.

8 **Q. HOW MUCH OF DUKE ENERGY CAROLINAS' ENERGY CONSUMED**  
9 **IN THE REVIEW PERIOD WAS GENERATED BY EACH TYPE OF**  
10 **GENERATING UNIT?**

11 A. During the review period, the Company generated 83,066,718 megawatt hours  
12 ("MWHs") of electricity<sup>1</sup>. The fossil units provided 48% of Duke Energy  
13 Carolinas' total generation, the nuclear units provided 51%, and the hydroelectric  
14 system provided 1% (net of megawatt-hours used for pumped storage).

15 **Q. PLEASE DESCRIBE HOW DUKE ENERGY CAROLINAS INCLUDED**  
16 **FUEL COSTS RELATED TO POWER PURCHASES IN ITS FUEL**  
17 **EXPENSES FOR THE REVIEW PERIOD.**

18 A. The definition of fuel costs related to purchased power set forth in § 58-27-865(A)  
19 of the 1976 Code of Laws of South Carolina ("S.C. Code. Ann.") includes the  
20 "costs of firm generation capacity purchases, which are defined as purchases made  
21 to cure a capacity deficiency or to maintain adequate reserve levels" and "the total

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<sup>1</sup> Reflects the Company's partial ownership share of Catawba Nuclear Station.

1 delivered cost of economy purchases of electric power.” The statute further defines  
2 economy purchases as purchases “made to displace higher cost generation, at a price  
3 which is less than the purchasing utility’s avoided variable costs for the generation  
4 of an equivalent amount of electric power.”

5 In accordance with the statute, the Company used the avoided cost method  
6 to determine the fuel component of purchases of power for Duke Energy Carolinas’  
7 retail customers. Under this methodology, the Company determines the costs it  
8 would have incurred in the absence of the purchase. This cost is determined by use  
9 of a model that identifies the incremental cost of the unit that would have been  
10 dispatched in the absence of the purchase and compares that cost to the cost of the  
11 purchase. The incremental cost includes the fuel and certain variable operation and  
12 maintenance costs. The Company includes in fuel costs the lower of the cost of the  
13 energy purchase or the cost Duke Energy Carolinas would have incurred. Duke  
14 Energy Carolinas’ customers thereby are ensured of receiving the benefit of  
15 purchased power.

16 **Q. PLEASE DESCRIBE HOW NUCLEAR COSTS ARE INCLUDED IN THE**  
17 **COMPANY’S FUEL EXPENSES.**

18 A. The cost of each fuel assembly is determined when the fuel is loaded in the reactor.  
19 The costs include yellowcake (uranium), conversion, enrichment, and fabrication.  
20 In his testimony, Company Witness David C. Culp describes the components that  
21 make up nuclear fuel in greater detail. An estimate of the energy content of each  
22 fuel assembly is also made. Nuclear fuel expenses for each month are based on the

1 energy output in units of million BTUs (“MBTUs”) of each fuel assembly in the  
2 core and Department of Energy ‘High Level Waste’ fee. A cost per MBTU is  
3 determined by dividing the cost of the assembly by its expected energy output. Each  
4 month a calculation of the MBTU output of an assembly is priced at its cost per  
5 MBTU. During the life of a fuel assembly, the expected energy output may change  
6 as a result of actual plant operations. When this occurs, changes are made in the  
7 cost per MBTU for the remaining energy output of the assembly.

8 **Q. CAN YOU EXPLAIN HOW COAL COSTS ARE INCLUDED IN THE**  
9 **COMPANY’S FUEL EXPENSES?**

10 A. Duke Energy Carolinas calculates coal costs charged to fuel expense on an  
11 individual plant basis. The expense charge is the product of the tons of coal  
12 conveyed to the bunkers for a generating unit during the month multiplied by the  
13 average cost of the coal, adjusting for the inventory remaining in the bunkers at the  
14 close of the month. The number of tons is determined by using scales located on the  
15 conveyor belt running to the unit’s coal bunkers and the measurement of bunker  
16 inventories at the close of each month. The average cost reflects the total cost of  
17 coal on hand as of the beginning of the month, computed using the moving average  
18 inventory method, plus the cost of coal delivered to the plant during the month.  
19 Duke Energy Carolinas determines the cost of coal based upon the invoice for the  
20 coal and the freight bill, and does not include any non-fuel cost or coal handling cost  
21 at the generating station.



1 Duke Energy Carolinas conducts annual physical inventories of coal piles  
2 through aerial surveys. The Company made an adjustment to book inventory and  
3 fuel expense in December 2008 based on the results of the annual inventory.

4 **Q. WHAT DOES MCMANEUS EXHIBIT 1 SHOW?**

5 A. McManeus Exhibit 1 sets forth the total system actual fuel costs (as burned) that the  
6 Company incurred from June 2008 through May 2009. This exhibit also shows fuel  
7 costs by type of generation and total MWHs generated during this period. The  
8 monthly fluctuations in total fuel cost during this period are primarily due to  
9 refueling and other outages at the nuclear stations, weather sensitive sales and the  
10 availability of hydroelectric generation.

11 **Q. WHAT IS THE MAGNITUDE OF THE COMPANY'S FUEL COST**  
12 **COMPARED TO THE TOTAL COST OF SERVICE?**

13 A. Fuel costs continue to be the largest cost item Duke Energy Carolinas incurs in  
14 providing electric service. For the twelve months ended May 2009, fuel and the fuel  
15 component of purchased power represented approximately 34% of the Company's  
16 total revenue. Of fuel costs, coal costs are the largest component, and comprised  
17 approximately 83% of the costs of the Company's fuel burned during the period  
18 June 2008 through May 2009.

19 **Q. WHAT CHANGES HAVE OCCURRED IN THE UNIT COST OF FUEL**  
20 **DURING RECENT REPORTING PERIODS?**

21 A. McManeus Exhibits 2 and 3 graphically portray the "as burned" cost of coal and  
22 nuclear fuel respectively in cents per MBTU for the twelve-month periods ending

1 each month from May 2007 through May 2009. As McManeus Exhibit 2 shows,  
2 coal costs increased during the period as testified to by Company Witness Vincent  
3 E. Stroud. McManeus Exhibit 3 shows that nuclear fuel costs have also increased  
4 over the same period. Witness Culp discusses changes in the cost of the various  
5 components of nuclear fuel in his testimony. The costs incurred by Duke Energy  
6 Carolinas for the other fossil fuels used by the Company, natural gas and fuel oil, are  
7 a very small percentage of the total fuel costs. The costs incurred during the review  
8 period for these fuels were approximately \$62 million, or 4% of the Company's  
9 total fuel burned for the period.

10 As testified to by Witness Stroud, the delivered cost of coal increased during  
11 the review period by 26% as compared to the previous period, which compares  
12 favorably to the Central Appalachia market prices during the same periods. As  
13 discussed in greater detail by Witness Culp in his testimony, the market price of two  
14 of the components of nuclear fuel has increased due to expirations of some long  
15 term contracts which were replaced with contracts at higher market prices. Natural  
16 gas costs also increased 72% during the period while fuel oil costs decreased by  
17 20%. Because natural gas and fuel oil are a small percentage of the Company's  
18 portfolio, the significant market increases in natural gas were minimized.

19 **Q. WHAT DOES MCMANEUS EXHIBIT 4 SHOW?**

20 A. McManeus Exhibit 4 graphically shows generation by type for the prior, current and  
21 projected billing periods. As the exhibit demonstrates, nuclear and fossil fuel  
22 account for 99-100% of the Company's total generation.

1   **Q.   DO YOU BELIEVE THE COMPANY'S ACTUAL FUEL COSTS**  
2       **INCURRED DURING THE PERIOD JUNE 2008 THROUGH MAY 2009**  
3       **WERE REASONABLE?**

4   A.   Yes. I believe the costs are reasonable and that Duke Energy Carolinas has  
5       demonstrated that it meets the criteria set forth in S.C. Code. Ann. § 58-27-865(F).  
6       These costs also reflect the Company's continuing efforts to maintain reliable  
7       service and an economical generation mix, thereby minimizing the total cost of  
8       providing service to our South Carolina retail customers.

9   **Q.   HOW DID THE COMPANY CALCULATE ITS FUEL COST RECOVERY**  
10       **DURING THE JUNE 2008 THROUGH SEPTEMBER 2009 TIME PERIOD?**

11 A.   McManeus Exhibit 5 shows the actual fuel costs incurred for the period June 2008  
12       through May 2009 and the estimated fuel costs for June 2009 through September  
13       2009. This exhibit compares the fuel costs incurred with the revenues collected  
14       applying the applicable fuel cost component of 2.2317 ¢/kWh for the period  
15       October 2008 through September 2009.

16 **Q.   WHAT IS THE BASIS FOR ESTIMATING FUEL COSTS AS SHOWN ON**  
17       **MCMANEUS EXHIBITS 5 AND 6?**

18 A.   Duke Energy Carolinas developed the projections shown on McManeus Exhibits 5  
19       and 6 based on the latest information available to the Company. The projected kWh  
20       sales are from the Company's spring 2009 sales forecast. Projected nuclear  
21       generation reflects planned outages, which include refueling outages at 6 units  
22       including one that extends beyond the forecast period. The projection of fuel costs

1 are based on a 97% capacity factor for the nuclear units while they are running. The  
2 Company's most recent nuclear fuel cost estimate was used to determine projected  
3 nuclear fuel expense. For the projected period June 2009 through September 2010,  
4 conventional hydroelectric generation was based on the Company's historical  
5 median hydro generation for the period 1978 through 2008. Pumped storage  
6 hydroelectric generation was based on the review period pumped storage operation  
7 at Jocassee and Bad Creek. The Company estimates fuel costs of energy purchases  
8 based on historical purchase quantities and price. Oil and gas fuel costs and  
9 generation are based on a three year average. Renewable generation and purchases  
10 reflect the Company's forecast of amounts to be generated or acquired during the  
11 billing period and are priced at avoided fuel costs. The Company assumes that the  
12 remainder of customers' energy needs is served from coal-fired units. The projected  
13 price for coal contracts is based on the price of coal contracts that will be in place  
14 during the projection period along with the current market price for any coal needs  
15 beyond the currently contracted amounts.

16 **Q. HOW DO INTERSYSTEM SALES OF POWER AFFECT THE**  
17 **CALCULATION OF FUEL COSTS INCURRED AND THE PROJECTED**  
18 **FUEL FACTOR FOR SOUTH CAROLINA RETAIL CUSTOMERS?**

19 A. The review period fuel costs incurred are calculated by subtracting the fuel costs  
20 associated with non-firm intersystem sales from the total system burned fuel cost.  
21 To determine the fuel costs associated with these intersystem sales, Duke Energy  
22 Carolinas uses a post dispatch model to stack the sources of generation used in each

1 hour from least to highest total cost, and in order to hold retail customers harmless,  
2 typically assigns the highest cost generating units on an incremental basis to non-  
3 firm intersystem sales of power. The projected fuel factor is set based on an  
4 assumed amount and cost of intersystem sales. The amount of non-firm intersystem  
5 sales for the projected fuel factor is based on actual data. However, the costs of  
6 projected sales are adjusted from the review period costs by the same percentage  
7 change as between the review period and projected period cost per kWh of coal  
8 since higher priced fossil generation is typically assigned to intersystem sales.

9 **Q. HOW DO RENEWABLE GENERATION AND PURCHASES AFFECT THE**  
10 **PROPOSED FUEL RATE?**

11 A. Duke Energy Carolinas operates a portfolio of generating plants located in both  
12 North Carolina and South Carolina in order to supply the energy requirements of its  
13 firm native load customers in its service area. In addition, the Company makes  
14 purchases of power when economic, or when needed for reliability, to supplement  
15 its generation supply resources. During the billing period the Company expects to  
16 generate and purchase renewable energy to comply with North Carolina General  
17 Statutes § 62-133.8 (“Renewable Energy and Energy Efficiency Portfolio  
18 Standard”). The proposed fuel factors include renewable energy generated by the  
19 Company or purchased from third party suppliers priced at the Company’s avoided  
20 fuel cost of 4.91 cents per kWh.<sup>2</sup> The use of avoided fuel costs results in neither  
21 advantaging nor disadvantaging South Carolina retail customers with respect to

1 Duke Energy Carolinas' requirement to supply a portion of its North Carolina retail  
2 sales from renewable energy resources.

3 **Q. WHAT DOES THE COMPANY ANTICIPATE ITS FUEL RECOVERY**  
4 **POSITION WILL BE AS OF SEPTEMBER 30, 2009?**

5 A. Duke Energy Carolinas estimates that by the end of the current billing period  
6 (September 30, 2009), the Company will be over-recovered in South Carolina by  
7 \$38.1 million with respect to fuel costs and over-recovered by \$4.1 million with  
8 respect to environmental cost, for a total estimated over-recovery of \$42.2 million.

9 **Q. WHAT IS THE FUEL COST COMPONENT OF THE FUEL FACTORS**  
10 **THE COMPANY PROPOSES FOR THE BILLING PERIOD OCTOBER**  
11 **2009 THROUGH SEPTEMBER 2010?**

12 A. McManeus Exhibit 6 sets forth projected fuel costs for the period October 2009  
13 through September 2010. As shown on line 9, the fuel cost component estimated  
14 for recovery during this period is 2.1572 ¢/kWh. After adjusting for the cumulative  
15 over-recovery, the adjusted fuel cost component is 1.9741 ¢/kWh. Therefore, each  
16 of the three fuel factors proposed by the Company for Commission approval include  
17 fuel cost component of 1.9741 ¢/kWh. The primary driver of the proposed decrease  
18 in the fuel component is lower electric sales which results in lower fuel costs due to  
19 favorable generation mix, as the highest cost generating units are run less frequently.  
20 Lower sales during 2009 have contributed to the expected over-recovered balance of  
21 fuel costs at September 30, 2009, as well as expected lower system fuel costs during

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<sup>2</sup> The avoided fuel rate of 4.91 cents per kWh is the annualized avoided fuel rate component of the Schedule

1 the billing period.

2 **Q. HOW DOES DUKE ENERGY CAROLINAS REFLECT VARIABLE**  
3 **ENVIRONMENTAL COSTS IN ITS FUEL FACTORS?**

4 A. Pursuant to S.C. Code. Ann. § 58-27-865(A)(1), the Company calculates an  
5 environmental component for each of the Residential, General Service/Lighting and  
6 Industrial customer classes based upon the (1) over or under recovery of actual costs  
7 incurred for emission allowances and reagent costs permitted under that statute  
8 (“environmental costs”) for the period June 2008 through May 2009, (2) estimated  
9 over or under recovery of environmental costs for the period June 2009 through  
10 September 2009, and (3) projected environmental costs for the period October 2009  
11 through September 2010. The over/under recovery of environmental costs incurred  
12 and projected environmental costs are then allocated among the three customer  
13 classes based upon firm peak load for the appropriate period. The resulting  
14 allocated costs are converted to the environmental component for each class  
15 expressed in cents per kWh. Each environmental component is then added to the  
16 fuel component proposed above resulting in a total fuel factor for each class.

17 **Q. PLEASE EXPLAIN HOW THE COMPANY DETERMINED THE FIRM**  
18 **PEAK DEMAND FOR EACH CUSTOMER CLASS AND DEVELOPED**  
19 **THE ALLOCATION FACTORS FOR ENVIRONMENTAL COSTS.**

20 A. The demands of South Carolina retail customers by customer class at the time of  
21 Duke Energy Carolinas’ summer peak were adjusted by subtracting the amount of

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PP rates approved by the PSCSC in its Order No. 2009-43 in Docket 1995-1192-E, on June 25, 2009.

1 class demand for each customer class that is subject to interruption under the  
2 Company's approved demand-response programs, but not interrupted at the time of  
3 peak, in order to determine the firm demand. The firm demand for each class was  
4 then converted to a percentage of the total firm demand. The firm demand  
5 allocators are set forth on McManeus Exhibits 7 and 8. These percentages were  
6 used to allocate the environmental costs between the Residential, General  
7 Service/Lighting and Industrial customer classes.

8 **Q. HOW DID THE COMPANY CALCULATE ITS ENVIRONMENTAL COST**  
9 **RECOVERY DURING THE JUNE 2008 THROUGH SEPTEMBER 2009**  
10 **TIME PERIOD?**

11 A. McManeus Exhibit 7 shows the actual environmental costs incurred for the period  
12 June 2008 through May 2009 and the estimated environmental costs for June 2009  
13 through September 2009. The exhibit compares the environmental costs incurred  
14 with the revenue collected, applying the environmental cost components of .0222  
15 ¢/kWh, .0184 ¢/kWh, and .0098 ¢/kWh for the Residential, General  
16 Service/Lighting and Industrial classes respectively for the period October 2008  
17 through September 2009. Actual costs are allocated among customer classes using  
18 the 2007 firm peak demand on which the billed rates were established.

19 **Q. WHAT IS THE BASIS FOR ESTIMATING ENVIRONMENTAL COSTS AS**  
20 **SHOWN ON MCMANEUS EXHIBITS 7 AND 8?**

21 A. As discussed by Witnesses Roebel and Stroud, the projected reagent costs and gains  
22 or losses on the sale of emissions allowances are based upon the most current



forecasts produced by appropriate departments within the Company. The Company estimates emission allowance expense and environmental expenses recovered in non-firm intersystem sales based on actual data.

**Q. WHAT ARE THE ENVIRONMENTAL COST COMPONENTS THE COMPANY PROPOSES FOR THE BILLING PERIOD OCTOBER 2009 THROUGH SEPTEMBER 2010?**

A. McManeus Exhibit 8 sets forth projected environmental costs for the period October 2009 through September 2010. As shown on McManeus Exhibit 8, the proposed environmental cost components for recovery during this period are .0297 ¢/kWh for Residential customers, .0263 ¢/kWh for General Service/Lighting customers and .0182 ¢/kWh for Industrial customers. Projected environmental costs are allocated among customer classes using the 2008 firm peak demand.

**Q. WHAT IS THE COMBINED COST OF FUEL THE COMPANY PROJECTS FOR RECOVERY DURING THE PERIOD OCTOBER 2009 THROUGH SEPTEMBER 2010?**

A. As shown in McManeus Exhibit 9, the fuel cost component (as computed on McManeus Exhibit 6) is 1.9741 ¢/kWh for all customer classes. The environmental cost components (as computed on McManeus Exhibits 7 and 8) are 0.0046 ¢/kWh for Residential customers, 0.0058 ¢/kWh for General Service/Lighting customers, and 0.0038 ¢/kWh for Industrial customers. The combined fuel factors estimated for recovery during this period are 1.9787 ¢/kWh for Residential customers, 1.9799 ¢/kWh for General Service/Lighting customers and 1.9779 ¢/kWh for Industrial

1 customers. The Company seeks Commission approval for these proposed combined  
2 fuel factors. Based on our estimate, the proposed combined fuel factors would  
3 result in the Company being neither under- nor over-recovered in its fuel costs,  
4 including environmental costs, at the end of the billing period in September 2010.

5 **Q. PLEASE DESCRIBE THE SPECIAL PROVISION RELATING TO THE**  
6 **COMPANY'S CATAWBA PURCHASED CAPACITY LEVELIZATION**  
7 **("PCL") ACCOUNT BALANCE THAT WAS INCORPORATED INTO**  
8 **THE SETTLEMENT AGREEMENT REACHED IN DUKE ENERGY**  
9 **CAROLINAS' LAST FUEL PROCEEDING IN DOCKET NO. 2008-3-E?**

10 A. On October 3, 2008, the Commission issued Order No. 2008-671 in Docket No.  
11 2008-3-E which approved base rates for fuel costs and adopted a Settlement  
12 Agreement between the Office of Regulatory Staff ("ORS"), the South Carolina  
13 Energy Users Committee ("SCEUC") and the Company. The Settlement  
14 Agreement provided that Duke Energy Carolinas would transfer \$60 million of  
15 the Catawba PCL balance to the deferred fuel account to accelerate the return to  
16 customers of the PCL balance currently being returned pursuant to the rate  
17 decrement approved in Order No. 96-337. Order No. 2008-671 also authorized  
18 the Company to continue the current reduction in rates reflected in the partial true-  
19 ups to the PCL liability balance as previously approved by the Commission. It  
20 authorized Duke Energy Carolinas to offset the Demand-Side Management  
21 ("DSM") deferred cost liability balance with the PCL rate decrement after the  
22 Catawba PCL balance is reduced to zero.

1    **Q.     WHAT IS THE CURRENT CATAWBA PCL BALANCE?**

2    A.     The PCL balance as of June 30, 2009, was \$8.1 million and represents a liability  
3           owed to South Carolina retail customers by the Company.

4    **Q.     WILL THE CATAWBA PCL BALANCE BE REDUCED TO ZERO THIS**  
5       **YEAR?**

6    A.     Yes. The Company estimates that the balance will be reduced to zero between  
7           September 1 and December 31, 2009, depending on actual kWh sales during the  
8           remainder of 2009.

9    **Q.     DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

10   A.     Yes, it does.

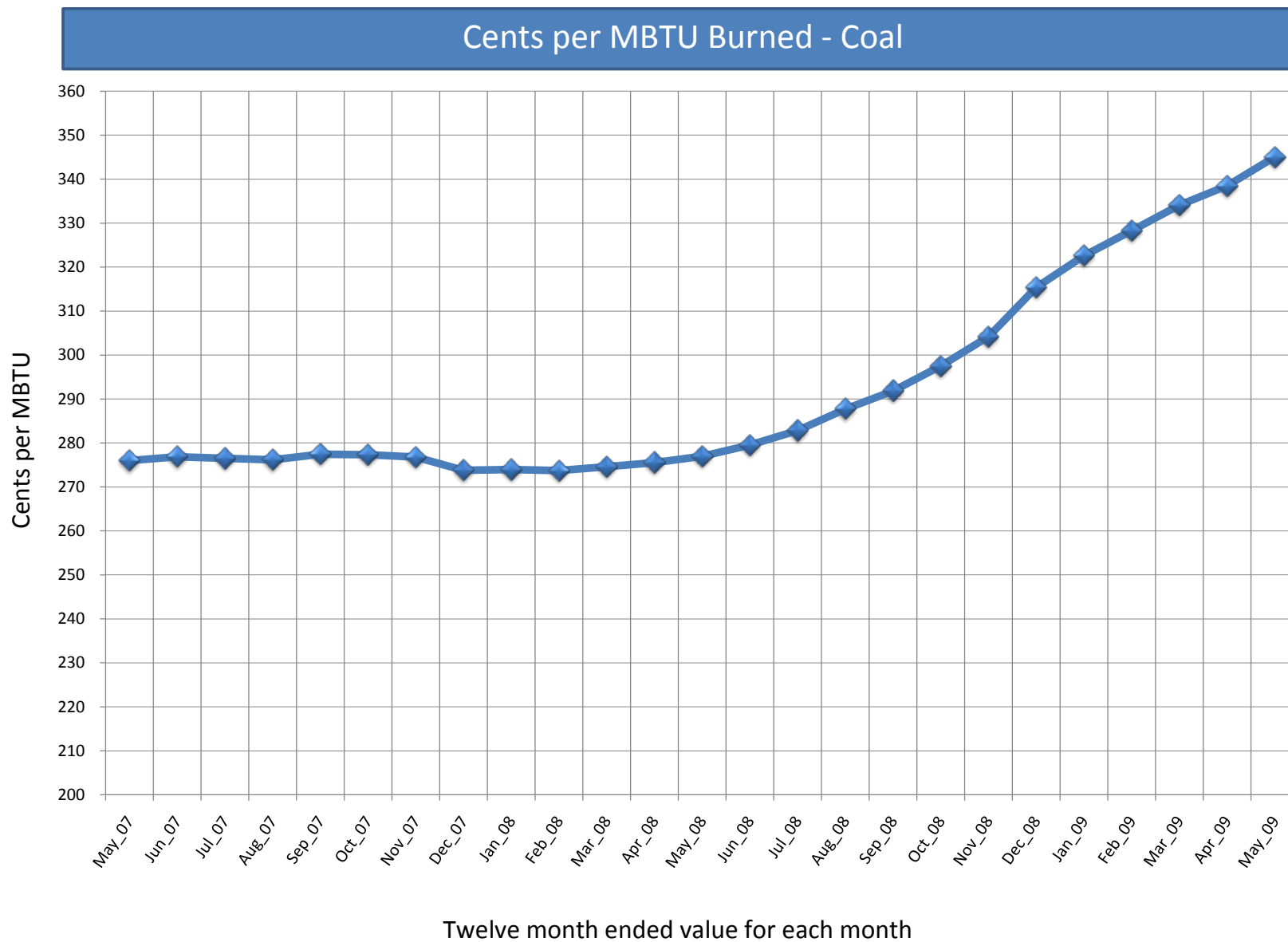
DUKE ENERGY CAROLINAS  
SOUTH CAROLINA FUEL CLAUSE  
2009 ANNUAL FUEL FILING - JULY 2009

**TOTAL COMPANY FUEL COST FOR REVIEW PERIOD**

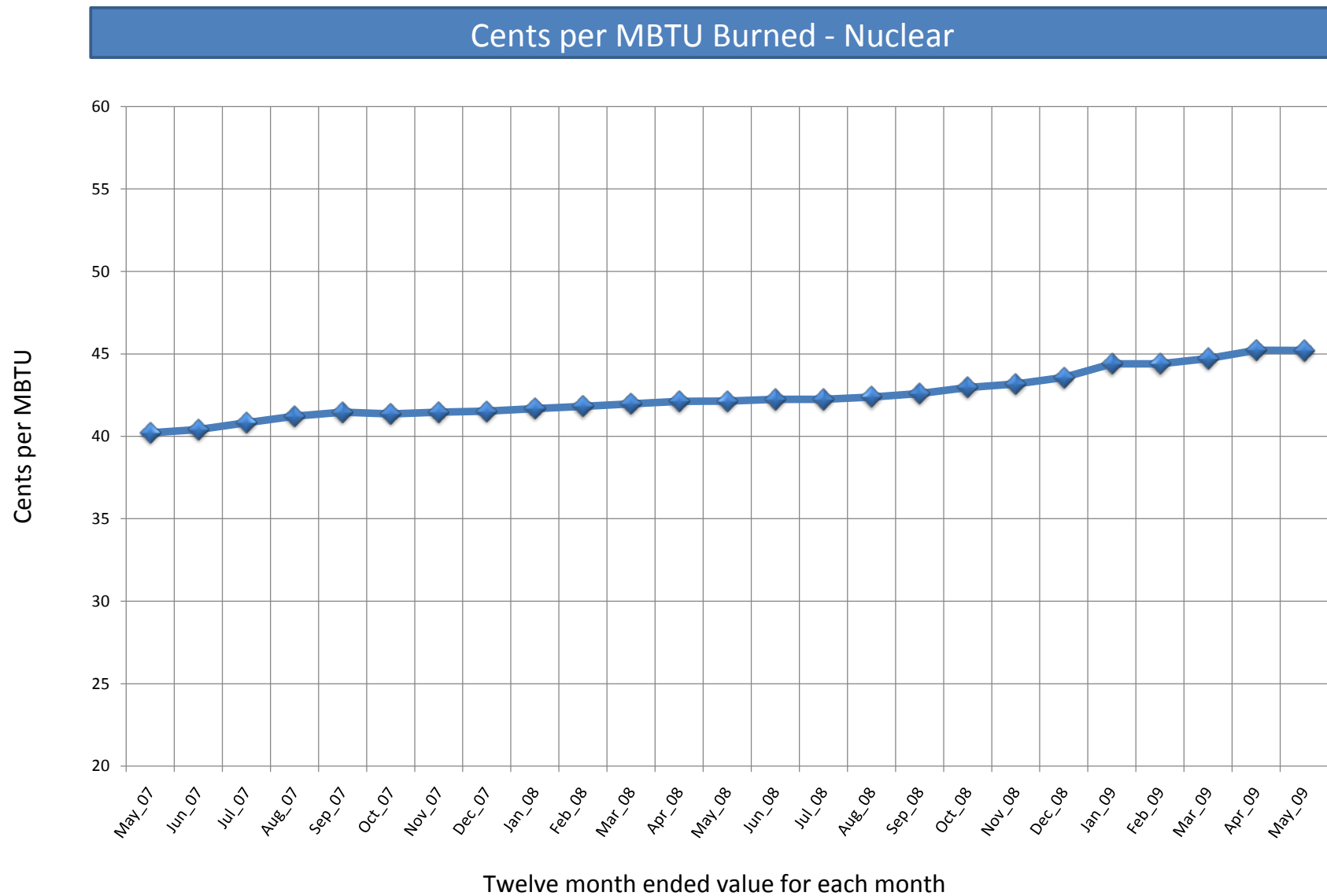
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Line No.	Description	12Mo. 5/08	June 2008	July 2008	Aug. 2008	Sept. 2008	Oct. 2008	Nov. 2008	Dec. 2008	Jan. 2009	Feb. 2009	March 2009	April 2009	May 2009	12 Month Total
1	Coal	\$1,276,220	\$127,725	\$132,302	\$135,070	\$120,703	\$106,006	\$119,862	\$108,039	\$133,466	\$90,685	\$93,632	\$70,471	\$80,553	\$1,318,514
2	Environmental	24,963	3,687	(735)	1,676	2,953	1,834	1,682	2,311	1,960	221	(2,201)	(2,465)	1,010	11,933
3	Oil	19,529	1,771	1,365	1,205	1,784	1,184	2,061	1,557	1,383	1,654	1,285	884	788	16,921
4	Gas	58,814	41,752	(1,964)	3,316	(173)	110	216	220	440	408	481	105	170	45,081
5	Nuclear	<u>176,080</u>	<u>15,448</u>	<u>16,725</u>	<u>16,827</u>	<u>15,191</u>	<u>13,347</u>	<u>12,713</u>	<u>17,092</u>	<u>18,460</u>	<u>16,639</u>	<u>17,970</u>	<u>17,964</u>	<u>15,052</u>	<u>193,428</u>
6	Total	\$1,555,606	\$190,383	\$147,693	\$158,094	\$140,458	\$122,481	\$136,534	\$129,219	\$155,709	\$109,607	\$111,167	\$86,959	\$97,573	\$1,585,877
7	MWH Gen.	89,407,595	8,030,495	8,120,911	7,986,785	6,922,528	5,962,259	6,172,495	6,818,807	7,862,100	6,345,253	6,627,823	5,747,936	5,827,358	82,424,750

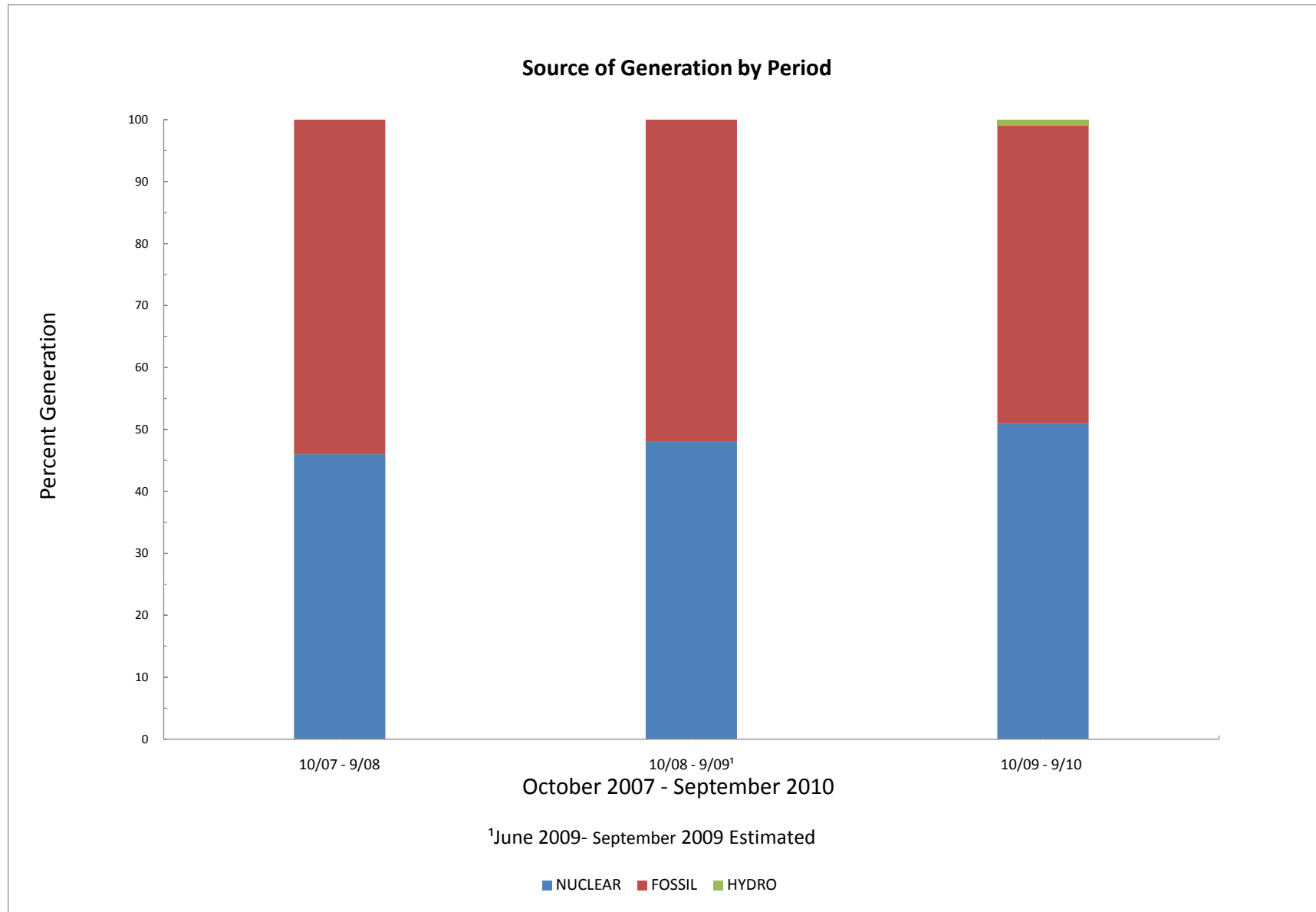
COAL COST PER MBTU BURNED



NUCLEAR COST PER MBTU BURNED



**SOURCE OF GENERATION BY PERIOD**



DUKE ENERGY CAROLINAS  
SOUTH CAROLINA FUEL CLAUSE  
2009 ANNUAL FUEL FILING - JULY 2009

**ACTUAL AND ESTIMATED FUEL COSTS AND REVENUES FOR JUNE 2008 - SEPTEMBER 2009**  
\$000

Line No.	Item	<u>Actual</u> June 2008	<u>Actual</u> July 2008	<u>Actual</u> Aug. 2008	<u>Actual</u> Sept. 2008	<u>Actual</u> Oct. 2008	<u>Actual</u> Nov. 2008	<u>Actual</u> Dec. 2008	<u>Actual</u> Jan. 2009	<u>Actual</u> Feb. 2009	<u>Actual</u> March 2009	<u>Actual</u> April 2009	<u>Actual</u> May 2009	Estimate June 2009	Estimate July 2009	Estimate Aug. 2009	Estimate Sept. 2009
1	Fossil Fuel	\$171,248	\$131,703	\$139,592	\$122,314	\$107,300	\$122,139	\$109,816	\$135,289	\$ 92,747	\$ 95,398	\$ 71,461	\$ 81,511	\$111,016	\$132,749	\$152,007	\$166,332
2	Nuclear Fuel	15,448	16,725	16,827	15,191	13,347	12,713	17,092	18,460	16,639	17,970	17,964	15,052	17,506	18,107	18,107	14,535
3	Renewable Purch Pwr	0	0	0	0	0	0	0	0	0	0	0	0	183	183	183	183
4	Fuel In Purchases	43,239	25,748	14,468	10,770	17,175	25,781	9,381	5,392	8,793	4,196	7,657	10,847	18,901	20,070	15,274	17,188
5	Fuel In Intersystem Sales	<u>9,265</u>	<u>11,952</u>	<u>10,958</u>	<u>15,163</u>	<u>1,889</u>	<u>4,684</u>	<u>14,271</u>	<u>22,562</u>	<u>4,904</u>	<u>2,123</u>	<u>644</u>	<u>710</u>	<u>4,968</u>	<u>12,630</u>	<u>10,969</u>	<u>11,622</u>
6	Total Costs	\$220,670	\$162,224	\$159,929	\$133,112	\$135,933	\$155,949	\$122,018	\$136,579	\$113,275	\$115,441	\$ 96,438	\$106,700	\$ 142,637	\$158,478	\$174,601	\$186,615
7	MWH Sales	7,193,515	7,724,863	7,694,730	7,472,224	6,120,889	6,074,613	6,805,100	6,983,324	6,850,434	6,303,841	5,715,092	5,636,993	6,706,299	7,275,893	7,719,223	7,405,200
8	Fuel Cost ¢/KWH	3.0676	2.1000	2.0784	1.7814	2.2208	2.5672	1.7930	1.9558	1.6535	1.8313	1.6874	1.8929	2.1269	2.1781	2.2619	2.5201
9	¢/KWH Billed	1.7457	1.7457	1.7457	1.7457	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317	2.2317
10	SC Retail MWH Sales	1,897,043	2,028,039	2,035,741	1,990,377	1,584,631	1,592,476	1,769,078	1,694,883	1,741,562	1,557,118	1,434,985	1,424,373	1,800,428	1,915,141	2,037,537	1,967,114
11	\$ (Over) Under	\$25,077	\$7,185	\$6,773	\$711	(\$173)	\$5,343	(\$7,762)	(\$4,676)	(\$10,070)	(\$6,235)	(\$7,812)	(\$4,826)	(\$1,887)	(\$1,027)	\$615	\$5,673
12	Prior Period (Over)/Under	\$11,888															
13	Economic Purchase Adj. per Docket 2008-3-E				2,807												
14	PCL Giveback				(59,737)												
15	Cumulative (Over)/Under	\$36,965	\$44,150	\$50,923	(\$5,296)	(\$5,469)	(\$126)	(\$7,888)	(\$12,564)	(\$22,634)	(\$28,869)	(\$36,681)	(\$41,507)	(\$43,394)	(\$44,421)	(\$43,806)	(\$38,133)



DUKE ENERGY CAROLINAS  
SOUTH CAROLINA FUEL CLAUSE  
2009 ANNUAL FUEL FILING - JULY 2009

**PROJECTED PERIOD FUEL COST FOR OCTOBER 2009 - SEPTEMBER 2010**

\$000

Line No.	Item	Oct. 2009	Nov. 2009	Dec. 2009	Jan. 2010	Feb. 2010	March 2010	April 2010	May 2010	June 2010	July 2010	Aug. 2010	Sept. 2010	12 Month Total
1	Fossil Fuel	\$93,620	\$90,943	\$116,191	\$134,539	\$123,369	\$110,538	\$108,704	\$90,556	\$110,129	\$132,373	\$151,366	\$145,208	\$1,407,531
2	Nuclear Fuel	15,149	15,673	17,436	19,065	17,216	16,677	15,680	16,317	18,430	19,065	19,065	18,135	207,907
3	Solar Distribution Generatio	-	-	1	4	7	14	20	26	32	38	44	50	236
4	Renewable Purch Pwr	183	183	285	285	285	285	285	603	603	603	603	603	4,805
5	Fuel In Purchases	30,932	25,508	13,285	9,730	12,014	(2,515)	4,941	19,430	18,672	19,883	15,074	16,965	183,918
6	Fuel In Intersystem Sales	<u>2,331</u>	<u>4,736</u>	<u>16,301</u>	<u>27,404</u>	<u>5,775</u>	<u>2,346</u>	<u>743</u>	<u>1,071</u>	<u>4,956</u>	<u>12,627</u>	<u>10,957</u>	<u>11,595</u>	<u>100,842</u>
7	Total Fuel Costs	\$137,553	\$127,571	\$130,897	\$136,218	\$147,116	\$122,653	\$128,886	\$125,860	\$142,909	\$159,334	\$175,194	\$169,365	\$1,703,556
8	Total MWH Sales	6,020,769	5,902,307	6,524,657	6,936,244	6,692,919	6,046,281	5,925,231	5,860,888	6,690,160	7,274,452	7,710,607	7,387,701	78,972,217
9	Fuel Costs Incurred ¢/kwh	2.2846	2.1614	2.0062	1.9639	2.1981	2.0286	2.1752	2.1475	2.1361	2.1903	2.2721	2.2925	2.1572
10	SC Retail MWH Sales	1,607,910	1,587,278	1,709,383	1,787,499	1,756,108	1,573,641	1,586,646	1,576,242	1,779,165	1,897,468	2,018,252	1,948,230	20,827,823
11	SC Fuel Costs	\$36,734	\$34,307	\$34,294	\$35,105	\$38,601	\$31,923	\$34,513	\$33,850	\$38,005	\$41,560	\$45,857	\$44,663	\$449,298
12	(Over)/Under on Exhibit 5													(\$38,133)
13	SC Fuel Costs													\$411,165
14	SC Fuel Cost ¢/kwh													1.9741

ACTUAL AND ESTIMATED ENVIRONMENTAL COST AND REVENUES FOR JUNE 2008 - SEPTEMBER 2009

\$000

Line No.		Summer 2007 Firm Coincident Peak (CP) KWs	CP %																
1	Residential	1,730,860	41.57%																
2	General/Lighting	1,240,264	29.79%																
3	Industrial	1,192,132	28.63%																
4	Total SC	4,163,256	100.00%																
	Environmental Costs Incurred	Actual June 2008	Actual July 2008	Actual Aug. 2008	Actual Sept. 2008	Actual Oct. 2008	Actual Nov. 2008	Actual Dec. 2008	Actual Jan. 2009	Actual Feb. 2009	Actual March 2009	Actual April 2009	Actual May 2009	Estimate June 2009	Estimate July 2009	Estimate Aug. 2009	Estimate Sept. 2009	16 Month Total	
5	Reagents Expense	\$ 3,486	\$ 1,964	\$ 2,396	\$ 3,069	\$ 1,746	\$ 1,697	\$ 2,209	\$ 1,875	\$ 1,301	\$ 2,003	\$ 1,069	\$ 1,594	\$ 2,661	\$ 2,606	\$ 2,736	\$ 2,203	\$ 34,614	
6	Emission Allowance Expense	201	190	164	144	86	113	97	36	17	19	19	13	16	27	25	20	1,187	
7	Environmental Costs Recovered in Intersystem Sales	(101)	(351)	(257)	(172)	(27)	(62)	(362)	(500)	(113)	(34)	(12)	(11)	(9)	(24)	(17)	(6)	(2,057)	
8	Gain on NOx Sales	-	(2,890)	(884)	(259)	2	(128)	6	49	(1,097)	(4,223)	(3,554)	(597)	(1,904)	(1,904)	(1,904)	(1,904)	(21,191)	
9	Net Environmental Costs	\$3,586	(\$1,086)	\$1,419	\$2,782	\$1,806	\$1,619	\$1,950	\$1,460	\$108	(\$2,236)	(\$2,477)	\$999	\$764	\$704	\$840	\$313	\$ 12,553	
10	SC % of KWH Sales	26.37%	26.25%	26.46%	26.64%	25.89%	26.22%	26.00%	24.27%	25.42%	24.70%	25.11%	25.27%	26.85%	26.32%	26.40%	26.56%	26.54%	
11	SC Environmental Costs	\$ 946	\$ (285)	\$ 375	\$ 741	\$ 468	\$ 425	\$ 507	\$ 354	\$ 28	\$ (552)	\$ (622)	\$ 253	\$ 205	\$ 185	\$ 222	\$ 83	\$ 3,332	
12	SC Environmental Costs Billed [Increment/(Decrement)]	\$ 1,040	\$ 1,143	\$ 1,137	\$ 1,099	\$ 245	\$ 245	\$ 292	\$ 288	\$ 289	\$ 258	\$ 230	\$ 229	\$ 289	\$ 316	\$ 335	\$ 322	\$ 7,756	
13	SC Environmental Costs (Over)/Under Recovery	\$ (94)	\$ (1,428)	\$ (762)	\$ (358)	\$ 222	\$ 180	\$ 215	\$ 67	\$ (261)	\$ (811)	\$ (852)	\$ 24	\$ (84)	\$ (131)	\$ (113)	\$ (239)	\$ (4,425)	
14	Prior Period (Over)/Under Recovery	\$ 337																	
15	Cummulative SC Environmental Costs (Over)/Under Recovery	\$ 243	\$ (1,185)	\$ (1,946)	\$ (2,304)	\$ (2,081)	\$ (1,902)	\$ (1,687)	\$ (1,620)	\$ (1,881)	\$ (2,691)	\$ (3,543)	\$ (3,519)	\$ (3,604)	\$ (3,735)	\$ (3,848)	\$ (4,087)		
<u>SC Environmental Costs (Over)/Under Recovery Allocated on Firm CP KWs</u>																			
16	Residential																	\$ (1,699)	
17	General/Lighting																	(1,218)	
18	Industrial																	(1,170)	
19	Total SC																	\$ (4,087)	
<u>Projected SC MWH Sales from Exhibit 8</u>																			
20	Residential																	6,779,317	
21	General/Lighting																	5,938,556	
22	Industrial																	8,109,950	
23	Total SC																	20,827,823	
<u>SC Environmental Costs (Over)/Under Recovery ¢/KWH</u>																			
24	Residential																	(0.0251)	
25	General/Lighting																	(0.0205)	
26	Industrial																	(0.0144)	

DUKE ENERGY CAROLINAS  
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**PROJECTED PERIOD ENVIRONMENTAL COST FOR OCTOBER 2009 - SEPTEMBER 2010**

\$000

Line No.		Summer 2008 Firm Coincident Peak (CP) KWs	CP %											12 Month Total
1	Residential	1,601,942	39.84%											
2	General/Lighting	1,242,966	30.91%											
3	Industrial	1,175,800	29.24%											
4	Total SC	4,020,708	100.00%											
		<u>Oct. 2009</u>	<u>Nov. 2009</u>	<u>Dec. 2009</u>	<u>Jan. 2010</u>	<u>Feb. 2010</u>	<u>March 2010</u>	<u>April 2010</u>	<u>May 2010</u>	<u>June 2010</u>	<u>July 2010</u>	<u>Aug. 2010</u>	<u>Sept. 2010</u>	<u>Total</u>
	<b>Environmental Costs</b>													
5	Reagents	\$ 2,112	\$ 2,192	\$ 2,527	\$ 2,543	\$ 2,255	\$ 2,055	\$ 1,552	\$ 1,976	\$ 2,526	\$ 2,871	\$ 2,983	\$ 2,554	\$ 28,144
6	Emission Allowance Expense	14	17	27	30	27	22	23	25	35	50	52	31	355
7	Environmental Costs Recovered in Intersystem Sales	(6)	(2)	(29)	(42)	(47)	(39)	(20)	(9)	(28)	(56)	(61)	(27)	(369)
8	Gain on NOx Sales	<u>(1,904)</u>	<u>(1,904)</u>	<u>(1,904)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(353)</u>	<u>(8,893)</u>
9	Net Environmental Costs	\$ 216	\$ 303	\$ 620	\$ 2,177	\$ 1,882	\$ 1,685	\$ 1,201	\$ 1,639	\$ 2,179	\$ 2,511	\$ 2,620	\$ 2,204	\$ 19,238
10	SC % of KWH Sales	26.71%	26.89%	26.20%	25.77%	26.24%	26.03%	26.78%	26.89%	26.59%	26.08%	26.18%	26.37%	
11	SC Environmental Costs	\$ 58	\$ 81	\$ 163	\$ 561	\$ 494	\$ 439	\$ 322	\$ 441	\$ 579	\$ 655	\$ 686	\$ 581	\$ 5,059
	<b>SC Environmental Costs Allocated on CP KWs Allocated on CP KWs</b>													
12	Residential													\$ 2,016
13	General/Lighting													1,564
14	Industrial													1,479
15	Total SC													\$ 5,059
	<b>SC MWH Sales</b>													
16	Residential													6,779,317
17	General/Lighting													5,938,556
18	Industrial													8,109,950
19	Total SC													20,827,823
	<b>SC Environmental Costs ¢/KWH</b>													
20	Residential													0.0297
21	General/Lighting													0.0263
22	Industrial													0.0182

DUKE ENERGY CAROLINAS  
SOUTH CAROLINA FUEL CLAUSE  
2009 ANNUAL FUEL FILING - JULY 2009

**PROJECTED PERIOD FUEL FACTORS BY CUSTOMER CLASS**

Line No.	Summary ¢/KWH	SC Fuel Factor from Exhibit 6	SC Environmental Costs from Exhibits 7 and 8	Combined Projected Fuel Factor
1	Residential	1.9741	0.0046	<b>1.9787</b>
2	General/Lighting	1.9741	0.0058	<b>1.9799</b>
3	Industrial	1.9741	0.0038	<b>1.9779</b>